IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title:	"Automatic Relevance-Based Preloading of Relevant Information in Portable Devices"

Applicant(s): Reiner Kraft et al.
Attorney Docket No.: ARC920010009US1

Serial No.:	09/783,666	**Examiner**:	Mohammad A. Siddiqi
Filed:	02/14/2001	**Art Unit**:	2154

Board of Patent Appeals and Interferences
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450.

SUPPLEMENTAL APPELLANTS' BRIEF

Dear Sir:

   This Supplemental Appellants' Brief is submitted in response to the Notification of Non-Compliant Appeal Brief of December 1, 2006.

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(1)   Real Party in Interest

The real party in interest is International Business Machines Corporation.

(2)   Related Appeals and Interferences

No other appeals or interferences exist that relate to the present application or appeal.

(3)   Status of Claims

The Final Office Action of July 21, 2004 rejects claims 1-28. Claims 1 - 28 are pending and are being appealed.

(4)   Status of Amendments

No amendments are outstanding.

(5)   Summary of Claimed Subject Matter

<u>Independent Claim 1</u>

The present invention generally relates to the field of integrated computing and communication, and particularly to a computer software program that analyzes the relevance of stored information to current or scheduled activities, sorts this information based upon relevance, and transfers the most relevant information to a communication device. More specifically, the communication device is a mobile device with limited memory and storage resources, such as a PDA or a mobile telephone. Page 1, lines 14-20.

Portable devices, in order to be small, have a limited amount of power source (i.e., battery) and memory and storage space. Consequently, every piece of information stored on a mobile device needs to be relevant to the

user's needs, especially when the user is in a network-disconnected mode such as on a trip. Page 1, line 27- page 2, line 2.

The present invention pre-loads a portable device, before the occurrence of a trip or event, with information relevant to the user's current or upcoming tasks. Page 2, lines 20 - 22. Since only a limited amount of information can be stored on a portable device, the potentially "relevant information" items need to be sorted according to relevance so that only the most relevant information is transferred to, and stored onto the portable device. Page 3, lines 13 -16.

"Proximity" is measured in terms of distance, time, and/or association. A person or organization associated with the near-term task that is listed in the user's to-do list or address book is also (associatively) relevant. Page 3, lines 22 and 26 - 28. The association proximity measurement relies for example on those people explicitly indicated in the user's address book and to-do list. Page 8, lines 6 -7.

To implement the foregoing objects, the system 100 of the present invention, as illustrated in FIG. 1, automatically selects and pre-loads proximity-based relevant information onto one or more portable devices 135. System 100 generally includes the following components:

an information catalog 105 that contains the list of information sources and items to which the user has access and from which the system of the present invention will retrieve data to be loaded onto the portable device 135;

a proximity estimator 110 that determines the proximity of various information items to the user's tasks based on distance, time, and association;

a relevance estimator 115 that combines the three proximity measures into a single relevance score by, for example, computing their geometric mean;

an information retriever 120 that retrieves information items 130 that are to be preloaded onto the portable device 135; and

a device loader 125 that processes information items 130 retrieved by the information retriever 120 and loads them onto the portable device 135. As used herein, the retrieved information 130 is accumulated from a variety of sources, including but not limited to the user's desktop computer, the user's corporate intranet, the user's portable device 135 and web pages on the Internet. Page 6, lines 9-26 and FIG. 1.

With reference to FIG. 2, the information retriever 120 selects and retrieves the most relevant documents that are associated with the entries having the highest relevance score. Page 11, lines 12 – 13, and Fig. 2.

Independent Claim 11

While claim 1 exemplifies the present invention in connection with a method for automatic relevance-based preloading data to a computing device, claim 11 generally corresponds to claim 1, and exemplifies the present invention in connection with a system for automatic relevance-based preloading information items to a computing device.

With reference to FIG. 1 and to page 6, lines 9-26 of the specification, system 100 of the present invention generally includes the following components:

a proximity estimator 110 that determines the proximity of various information items to the user's tasks based on distance, time, and association;

a relevance estimator 115 that combines the three proximity measures into a single relevance score by, for example, computing their geometric mean;

an information retriever 120 that retrieves information items 130 that are to be preloaded onto the portable device 135; and

a device loader 125 that processes information items 130 retrieved by the information retriever 120 and loads them onto the portable device 135. As used herein, the retrieved information 130 is accumulated from a variety of sources, including but not limited to the user's desktop computer, the user's corporate intranet, the user's portable device 135 and web pages on the Internet.

Independent Claim 19

While claim 1 exemplifies the present invention in connection with a method for automatic relevance-based preloading data to a computing device, claim 19 generally corresponds to claim 1, and exemplifies the present invention in connection with a computer software program for automatic relevance-based preloading information items to a computing device.

With reference to FIGS. 1 and 2 and to page 1, lines 14-15 of the specification, the computer software program of the present invention implements the steps of method 200 of FIG. 2.

Independent Claim 21

Claim 21 recites a computer program product having a plurality of executable instruction codes for automatic relevance-based preloading information items to a computing device. Otherwise, both claims 1 and 21 recite generally similar elements and limitations. Reference is made to FIG. 1.

With reference to FIG. 2 and page 10, line 23 - page 11, line 13 of the specification, system 100 first examines the user's calendar at step 205 and notes that the user will be traveling tomorrow from his or her home base of New York, New York to San Jose, California. The proximity estimator 110 calculates the proximity of each phone entry based on the location and association at step 210. The relevance estimator 115 at step 215 determines that the phone numbers with area codes 408, 415, and 650 (those used in the San Jose / San Francisco, California area) are most relevant.

The relevance estimator 115 then scans the user's telephone list and sorts the contents so that those area codes are listed first, followed by telephone numbers in the user's "home" work location (area code 212). The information retriever 120 selects and retrieves these phone numbers at step 220 from the user's phone list plus any default phone numbers such as those for police, emergency, etc.

The copy process then begins at step 225 and as many numbers as will fit are copied to the mobile phone by the device loader 125. When the user returns to his or her "home" work location, he or she synchronizes the mobile phone to the desktop computer. The method 200 can be integrated with the synchronization process so that the system 100 repeats steps 205 through 225. Unless the user has another trip scheduled, the

telephone list is sorted with numbers closest to his or her "home" work location appearing first and those numbers are replaced on the user's mobile phone.

(6)   Grounds of Rejection to be Reviewed on Appeal

Issues on Appeal

The issues to be reviewed on appeal are as follows:

1. Whether claims 1, 11, 19, and 21 were objected on the ground that the limitation "Threshold" is not clearly defined in the specification.

2. Whether claims 1-28 were properly rejected under 35 U.S.C. 103(a) as being unpatentable over DeLorme et al. (5,948,040) (hereinafter DeLorme) in view of Liddy et al. (6,026,388) (hereinafter Liddy).

(7)   Arguments

7.1. First Issue: Objection to the limitation "Threshold"

Applicants respectfully submit that the <u>term "threshold" does not require any further clarification</u> as it is a common term that is clearly understood by a person of ordinary skill. More specifically, and in the context of the claims, for example claim 1, "a relevance score higher than the relevance threshold" implies a relevance score that is higher than a **relevance limit**.

7.2. Second Issue: Claims Rejection under 35 USC § 103

Claims 1-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over DeLorme et al. (U.S. Patent No. 5,948,040) (hereinafter DeLorme) in view of Liddy et al. (U.S. Patent No. 6,026,388) (hereinafter Liddy).

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLorme et al. (5,948,040) (hereinafter DeLorme) in view of Liddy et al. (6,026,388). Applicants respectfully traverse this rejection and submit that the claims on file are not obvious in view of the cited references and are patentable thereover. In support of this position, the table on pages 9 and 10 lists the elements of representative claim 1, the corresponding Examiner's arguments, and a summary outline of Applicants' arguments.

Legal Standards for Obviousness

The following legal authorities set the general legal standards in support of Applicant's position of non obviousness, with emphasis added for added clarity:

- MPEP §2143.03, "All Claim Limitations Must Be Taught or Suggested: To establish prima facie obviousness of a claimed invention, **all the claim limitations must be taught or suggested by the prior art**. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "**All words in a claim must be considered** in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)."

- MPEP §2143.01, "The Prior Art Must Suggest The Desirability Of The Claimed Invention: There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (**The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a prima facie case of obvious was held improper**.). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

- "**Obviousness cannot be established** by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion** supporting the combination." *In re Fine, 837 F.2d at 1075, 5 USPQ2d at 1598* (citing *ACS Hosp. Sys. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).* **What a reference teaches** and whether it teaches toward or **away from the claimed invention** are questions of fact. See *Raytheon Co. v. Roper Corp., 724 F.2d 951, 960-61, 220 USPQ 592, 599-600 (Fed. Cir. 1983),* cert. denied, 469 U.S. 835, 83 L. Ed. 2d 69, 105 S. Ct. 127 (1984). "

- "When a rejection depends on a combination of prior art references, there must be **some teaching, suggestion, or motivation** to combine the references. See *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)." Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention **where there is some teaching, suggestion, or motivation** to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP 2143.01; In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317

(Fed. Cir. 2000); In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

- "With respect to core factual findings in a determination of patentability, however, the **Board cannot simply reach conclusions based on its own understanding or experience** -- or on its assessment of what would be basic knowledge or common sense. **Rather, the Board must point to some concrete evidence in the record** in support of these findings." See In re Zurko, 258 F.3d 1379 (Fed. Cir. 2001).

- "We have noted that **evidence of a suggestion, teaching, or motivation to combine** may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), Para-Ordinance Mfg. v. SGS Imports Intern., Inc., 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although "the suggestion more often comes from the teachings of the pertinent references," Rouffet, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, **the showing must be clear and particular**. See, e.g., C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232. **Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence."** E.g., McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); In re Sichert, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977)." See In re Dembiczak, 175 F. 3d 994 (Fed. Cir. 1999).

- "To prevent the use of hindsight based on the invention to defeat patentability of the invention, **this court requires the examiner to show a motivation to combine the references** that create the case of obviousness. In other words, **the examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references **for combination in the manner claimed**." See In re Rouffet, 149, F.3d 1350 (Fed. Cir. 1998).

- The mere fact that references can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests the desirability of the combination**. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device "may be

capable of being modified to run the way the apparatus is claimed, **there must be a suggestion or motivation in the reference** to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

- If the **proposed modification would render the prior art invention being modified unsatisfactory** for its intended purpose, <u>then there is no suggestion or motivation</u> to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

PRESENT CLAIM 1	OFFICE ACTION ARGUMENTS	APPLICANTS' ARGUMENTS
1. A method for automatic relevance-based preloading data to a computing device, comprising:	a method for automatic relevance-based preloading data to a computing device (col 48, lines 5-33), comprising:	7.3.1 – DeLorme does not provide automatic relevance-based preloading data.
identifying any one or more of persons or current scheduled tasks prior to the occurrence of the tasks;	identifying any one or more of persons or current scheduled tasks prior to the occurrence of the tasks (fig 5, col 48, lines 47_67);	
analyzing the relevance of stored data to any one or more of the current scheduled tasks or persons;	analyzing the relevance of stored data (col 49, lines 1-6) to any one or more of the current scheduled tasks or persons (col 49, lines 1-32);	7.3.2 – DeLorme does not provide analyzing the relevance, as a whole.
sorting the stored data based upon the relevance to any one or more of the current scheduled tasks or persons;	sorting the stored data based (col 49, lines 51-59) upon the relevance to any one or more of the current scheduled tasks or persons (col 49, lines 33-59);	7.3.3 – DeLorme does not provide sorting based upon the relevance, as a whole.
setting a predetermined relevance threshold;	setting a predetermined relevance threshold (col 48, lines 5-33, zip code, phone exchange areas are setting relevance threshold), and	7.3.4 – DeLorme does not provide setting a predetermined relevance threshold.
automatically preloading selected sorted data to the computing device with a relevance score higher than the	automatically preloading (pre-arranged, col. 46, lines 55-67, col 48, 30-33, transferring is preloading) selected sorted data to the computing device (col 48, lines 25-33) with a	7.3.5 – DeLorme fails to disclose relevance score, and automatic preloading based on a relevance score that is higher than the relevance

relevance threshold; and	higher (array, sorting, fig 6, col 53, lines 1-44) than the relevance threshold (intended departure time, when, where, who to visit, or what to do, are the inherent threshold values in the context of this invention, fig 6, col 5, line 61, col 53, lines 15-44, col 48, lines 5-33).	threshold.
wherein analyzing the relevance score comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure.	wherein analyzing comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks (POI/EOI, Optimally arranged output, EOI arrays, col 53, lines 15-43 col 17, lines 1-44), based on an association proximity measure and at least one proximity measure (col 17, lines 1-44, col 22), lines 10-37).	7.3.6 - DeLorme does not disclose analyzing based on the association proximity and at least one proximity measure.
	DeLorme fails to disclose relevance score. However, Liddy discloses relevance score (col 4, lines 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Liddy with DeLorme because it would provide optimal trip planner and the proximity decision will be based on the relevance score.	7.3.7 - The combination of DeLorme and Liddy does not disclose the present invention as a whole.

Independent Claims 1, 11, 19, and 21 in Light of the Cited References

Applicants will now detail the arguments presented in the table above, in support of the allowance of independent claims 1, 11, 19, and 21, and the claims dependent thereon, over the cited references. The arguments will now be presented relative to the representative claim 1.

<u>7.2.1 - DeLorme does not provide automatic relevance-based preloading data.</u>

The Examiner argues that DeLorme provides automatic relevance-based preloading data, and summarily refers to col. 48, lines 5-33 of DeLorme, without additional details or explanation.

Applicants respectfully traverse this rejection ground and submit that the cited text refers to a "map display graphic user interface" that enables the preview and selection of information to be eventually transferred to a handheld digital travel aid.

In other terms, DeLorme describes a user-initiated loading process, whereby the user "defines" the criteria (i.e., the beginning and destination) and based on these criteria the system determines the trip information that is loaded to a portable computer or travel aid. <u>On the other hand, the present invention describes an automatic loading process</u> of stored data based on the calculated relevance score proximity to the threshold.

<u>7.2.2 - DeLorme does not provide analyzing the relevance, as a whole.</u>

   The Examiner argues that DeLorme analyzes the relevance of stored data and summarily refers to col. 49, lines 1-6; to any one or more of the current scheduled tasks or persons and summarily refers to col. 49, lines 1-32 without further details or explanation.

   As an example, col. 49, lines 1-6 states the following: "TRIPS improves on CARS and Map'n'Go 1.0 -- for example, by addition of temporal and/or transactional travel information and database relations. POIs in CARS and Map'n'Go 1.0 included geographical and topical data records such as latitude/longitude location information and multimedia describing particular hotels and restaurants."

   It is not clear how this text suggests the analysis of the relevance of the stored data. Applicants submit that DeLorme does not provide an analysis of the relevance of the stored data. In DeLorme, the user selects information, which selection is followed by a transfer to the selected data, without being analyzed.

   In addition, claim 2 explains that "analyzing the relevance includes estimating a proximity of the stored data items to the any one or more of persons or current scheduled tasks, based on the combination of three proximity measures: distance, time, association." This feature / explanation is certainly not described in the DeLorme text that is cited by the Examiner. This cited text refers to the "addition" of information without alluding to the analysis of the information based on the proximity measures recited in claim 1.

Furthermore, the Examiner does not seem to consider this claim element as a whole, as required by the legal authorities above. On the contrary, the Examiner seems to dissect the element into subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

7.2.3 - DeLorme does not provide sorting based upon the relevance, as a whole.

The Examiner argues that DeLorme sorts the stored data based [and summarily refers to col. 49, lines 51-59] upon the relevance to any one or more of the current scheduled tasks or persons and summarily refers to col. 49, lines 33-59. Applicants respectfully traverse this rejection ground.

Similarly to the previous element, the Examiner's analysis strategy ignores the element as a whole, as required by the legal authorities above. As before, the Examiner has dissected the element into two subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

Applicants concedes that sorting data has been known, and that the relevance concept is also known. However, the present invention is not a simple recitation of these two elements independently from each other, but rather a combination of these elements and other elements in claim 1.

7.2.4 - DeLorme does not provide setting a predetermined relevance
   threshold.

   The Examiner argues that DeLorme sets "a predetermined relevance
threshold (col 48, lines 5-33 , zip code, phone exchange areas are setting
relevance threshold)." Applicants respectfully traverse this rejection ground
and the characterization of the term "threshold."

   As has been explained above, the common use of the term "threshold"
in the general context of the present invention, as understood by a person
of ordinary skill in the field, implies a limit. As a result, zip codes and area
codes cannot be considered as thresholds, even if the meaning of the term
Threshold were stretched to its maximum limit.

   Applicants submit that the values described by DeLorme do not qualify
as relevance threshold in that:

(1) The calculated relevance score of the stored data is compared to the
relevance threshold. DeLorme, on the other hand, does not compare the
zip code of the phone number to the calculated relevance score.

(2) According to the present invention, if the calculated relevance score is
"higher" than the threshold, the data is automatically loaded. However, in
DeLorme, if either the zip code (e.g., 410) is "greater" than a threshold zip
code (e.g., 409), then the stored data is not automatically loaded.

   Applicants submit that what the examiner refers to as relevance
threshold in DeLorme could arguably be viewed as a "filter" but not a

relevance threshold as intended to be used and as actually recited in the instant claim 1.

7.2.5 - DeLorme fails to disclose relevance score, and automatic preloading based on a relevance score that is higher than the relevance threshold.

The Examiner argues that DeLorme discloses "automatically preloading (pre-arranged, col. 46, lines 55-67, col 48, 30-33, transferring is preloading) selected sorted data to the computing device (col 48, lines 25-33) with a higher (array, sorting, fig 6, col 53, lines 1-44) than the relevance threshold (intended departure time, when, where, who to visit, or what to do, are the inherent threshold values in the context of this invention, fig 6, col 5, line 61, col 53, lines 15-44, col 48, lines 5-33)." Applicants respectfully traverse this rejection ground.

Similarly to the previous elements, the Examiner's analysis strategy ignores the element as a whole, as required by the legal authorities above. As before, the Examiner has dissected the element into subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

In addition, and **as repeatedly stated in the office action, "DeLorme fails to disclose relevance score**." It is incomprehensible how could DeLorme conduct an automatic preloading based on a feature that is admittedly not present? Although the Examiner resorts to a secondary reference, Liddy, to hypothetically substitute for this missing feature, the Examiner does

not address how the hypothetical combination, as a whole, conduct an automatic preloading based the relevance score.

7.2.6 - DeLorme does not disclose analyzing based on the association proximity and at least one proximity measure.

The Examiner argues that DeLorme discloses: "wherein analyzing comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks (POI/EOI, Optimally arranged output, EOI arrays, col 53, lines 15-43 col 17, lines 1-44), based on an association proximity measure and at least one proximity measure (col 17, lines 1-44, col 22, lines 10-37)". Applicants respectfully traverse this rejection ground.

Similarly to the previous elements, the Examiner's analysis strategy ignores the element as a whole, as required by the legal authorities above. As before, the Examiner has dissected the element into subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

The present invention makes a clear distinction between three proximity measures: distance, time, and association." Claim 1 specifies analyzing the relevance score by estimating a proximity of the stored data items based on an association proximity measure. As explained earlier, the association proximity measurement relates to people, who, for example, are explicitly indicated in the user's address book and to-do list. Refer to page 8, lines 6 - 7 of the specification. DeLorme does not describe such "association proximity" measure.

The text cited by the Examiner does not teach analyzing the relevance score, which, as admitted by the Examiner is not taught by DeLorme. In addition, it is not clear how could DeLorme analyze an element that is not described? Furthermore, even when the Examiner introduced the secondary reference, Liddy, he did not reconsider this element of "analyzing the relevance score."

7.2.7 - The combination of DeLorme and Liddy does not disclose the present invention as a whole.

The Examiner argues that DeLorme discloses: "DeLorme fails to disclose relevance score. However, Liddy discloses relevance score (col 4, lines 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Liddy with DeLorme because it would provide optimal trip planner and the proximity decision will be based on the relevance score." Applicants respectfully traverse this rejection ground.

Applicants submit that the combination of DeLorme and Liddy does not yield the same or similar design as the present invention, as a whole. More specifically, the Examiner summarily states that the combination of both references is possible, but does not explain how the DeLorme design could be changed to accommodate the relevance score concept. In particular, the Examiner did not explain how the DeLorme-Liddy combination performs the following steps:

1) **automatically preloading** selected sorted data to the computing device **with a relevance score** higher than the relevance threshold; and

2) wherein **analyzing the relevance score** comprises estimating a proximity of the stored data items.

In addition, Applicants respectfully submit that neither Liddy nor DeLorme provides some teaching or suggestion to support the combination of these two references. As a result, based on the legal authorities above, obviousness cannot be established.

Applicants incorporate by reference the presentation made earlier in support of the allowance of claim 1, and submit that the independent claims 11, 19, and 21 are similarly not obvious in view of combination of DeLorme and Liddy, for containing generally comparable elements and limitations. As a result, the independent claims 1, 11, 19, and 21 are allowable, and the claims dependent thereon are also allowable. Such allowance is respectfully requested.

7.2.8. Response to Arguments made in the Examiner's Answer

Although the Examiner's Answer of July 21, 2004 was vacated by the Board of Appeal's Order Returning Undocketed Appeal to Examiner of March 13, 2006, Appellants will nonetheless address the arguments made by the Examiner, in order to render the appeal process more efficient. Provided however that, if the Appellants' arguments that address the Examiner's Answer are deemed to be non-compliant, then Appellants respectfully request that these arguments be removed from the instant Appeal Brief.

DeLorme's system discloses the following software capabilities: (1) **a map display graphic user interface** enabling the TRIPS user to zoom … to pan or

shift seamlessly to other map locations … and to locate named places, zip code or phone exchange areas, street addresses, or other landmarks and ordinary language geographic location and direction identifiers on the map display;, ... (4) electronic communication or transfers of discrete, compact files … and/or (5) transferring of geographic data files to and from auxiliary devices.

In response to the applicant's arguments, DeLorme teaches automatic relevance-based preloading (… hotels, camp grounds, restaurant etc. are relevant to the POI's of planned TRIP, transferring data files to handheld digital aid is automatic, it **is done by the software using electronic communication… Software is coded instructions (programs) that make a computer do useful work, which is an automatic process in itself.**

The preamble of the claims on file clarifies that the claimed subject matter of the invention relates to the <u>**automaticity**</u> of the operation of the claimed system, computer program product, and process. Appellants respectfully submit that, in interpreting the claims on file, such automaticity, **that is the absence of the user's interception or interference**, must be persistently kept in mind, in order to avoid an overly broad and unjustifiable interpretation of the claims.

More specifically, the fact that the user of the DeLorme system uses **a map display graphic user interface** to zoom, pan, or shift through the information, implies that <u>it is the user who selects</u> the desired information, and that it is the user who <u>determines or contributes</u> to the determination of the relevance of the information that is to be preloaded. Consequently,

the DeLorme preloading process (as compared to the presently claimed system/process) is not automatic.

As it is best understood from the Examiner's comments, DeLorme is said to automatically transfer the information because it uses a computer. Appellants respectfully traverse this line of reasoning in view of the limitations of the claims on file. More specifically, the Examiner seems to completely overlook the terms "**relevance-based"** and has focused mainly (or exclusively) on the automatic transfer. Appellants wish to make it clear that the automatic transfer is performed only if the information is relevant. In other terms, the user of DeLorme manually locates the information that is relevant to him/her, such as points of interest like restaurants. Then, the user manually requests that this relevant information be transferred to a computing device. Thereafter, the transfer of the manually selected information is done automatically.

However, the manual selection of the points of interest and the manual request to transfer the information which the user manually selected to be relevant, does not and cannot qualify as "automatic." This is contrary to the present invention, as described in the instant application, where the user inputs the desired parameters, and lets the computer automatically determine the relevance of the information and the automatic transfer of this relevant information to a computing device, such as a PDA. Reference is made for example, to page 6, lines 9 - 12 of the instant application: "FIG. 1 illustrates a high level architecture of an exemplary system 100 for **automatically selecting and pre-loading** proximity-based relevant information onto one or more portable devices 135." As a result, the instant application makes it clear that automatic relevant-based preloading

includes **automatically selecting and pre-loading, and not simply the automatic transfer of information.**

DeLorme's system teaches ... the addition of temporal and/or transactional travel information and database relations ... data records include discrete temporal and accounting data as well as geographic and topical information ... In response to the applicants' arguments, DeLorme teaches analyzing the relevance of the stored data to any or more of the currently scheduled tasks or person (...by addition of temporal and/or transactional travel information and database... Col. 49, lines 2-3) which is similarly disclosed in the applicant's specification on page 2, lines 20-22. It is the examiner's understanding that a planned trip in itself is a scheduled task.

In the Appeal Brief, Appellants requested that the Examiner <u>consider</u> the rejected independent claims, as exemplified by <u>claim 1, as a whole, including the analysis step</u> that is recited therein. However, it appears that the <u>examiner still focused on a segment of claim 1, without considering the claim as a whole</u>.

More specifically, Appellants have recited in claim 1, the following <u>explanation of the analysis step</u>, which was not considered by the Examiner: "wherein analyzing the relevance score comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure."

As a result, the question that needs to be addressed by the Examiner is whether, in DeLorme, the step of "adding the temporal information" qualifies as an analysis by estimating the proximity of the stored data to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure." The answer is clearly in the negative, as DeLorme does not teach such an analysis by estimation as recited in the rejected claims.

In response to the applicants' arguments, DeLorme teaches sorting based upon the relevance to any one or more of the current scheduled task (Col. 49, lines 51-55). DeLorme reference reiterates the sorting and filtering techniques, which happens to be a well known process in the software and database art.

Similarly to the previous argument, the Examiner's analysis strategy ignores the element as a whole, as required by the legal authorities above. As before, the Examiner has dissected the element into two subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

Applicants concede that sorting data was previously known, and that the relevance concept was also known. However, the present invention is not a simple recitation of these two elements independently from each other, but rather recites a combination of these elements as well as other elements in claim 1.

More specifically, Appellants have recited in claim 1, the following explanation of the analysis step, which was not considered by the Examiner: "wherein analyzing the relevance score comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure."

As a result, the question that needs to be addressed by the Examiner is whether DeLorme teaches sorting based **upon the relevance** by estimating the proximity of the stored data to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure." The answer is clearly in the negative.

In response to the applicant's arguments, DeLorme teaches setting a predetermined threshold (... zip codes, phone exchange areas are interpreted as threshold or filtering criteria ... Col. 48, lines 5-33; Col. 49, lines 51-55). An ordinary person skilled in the art would interpret "setting a threshold" as a filtering criteria (... a relevance score higher than the relevance threshold... Brief, argument 8.1, page 5). Thereby, the examiner agrees with the applicant that "setting up threshold" is nothing more than a filtering criteria citing higher than a relevance limit.

As explained by Appellants, the common use of the term "threshold" in the general context of the present invention, as understood by a person of ordinary skill in the field, implies a limit. As a result, **zip codes and area codes cannot be considered as**

thresholds, even if the meaning of the term "threshold" were stretched to its maximum limit.

   Appellants submit that the values described by DeLorme do not qualify as relevance threshold in that:

(1) The calculated relevance score of the stored data is compared to the relevance threshold. DeLorme, on the other hand, does not compare the zip code of the phone number to the calculated relevance score.

(2) According to the present invention, if the calculated relevance score were "higher" than the threshold, the data is automatically loaded. However, in DeLorme, if either the zip code (e.g., 410) were "greater" than a threshold zip code (e.g., 409), then the stored data is not automatically loaded.

   Appellants submit that what the examiner refers to as relevance threshold in DeLorme could arguably be viewed as a "filter" but not a relevance threshold as intended to be used and as actually recited in the instant claim 1.

   Appellants further submit that <u>relevance reflects a relative relationship</u>. In other terms, one item is relevant to another item. More clearly, an item is said to be relevant to another object if the value that compares both items is smaller than a threshold or limit. <u>As a result, absolute values</u>, such as the time of departure, time of arrivals, etc., <u>that do not compare two values, do not qualify</u>, under the present invention, <u>as either threshold values or</u>

<u>as relevance scores</u>. This line of reasoning is also applicable to the next argument.

Examiner respectfully disagrees, DeLorme teaches automatically preloading (... pre-arranged, transferring data files to handheld digital aid ... Col. 46, lines 55-67; Col. 48, line 10; lines 30-34) selected sorted data to the computing device with a higher than the relevance threshold (... intended departure time, when, where, who to visit, or what to do, head/top of the array, sorting ... Fig. 6, Col. 5, line 61; Col. 48, lines 25-33;Col. 53, lines 1-44; Col. 53, lines 15-44) which is similarly disclosed in the applicant's specification on page 2, lines 20-23, that describes pre-loads before the occurrence of a trip; page 10, lines 1-7 further clarifies preloading.

As presented by Appellants in the Appeal Brief: The Examiner argues that DeLorme discloses "automatically preloading (pre-arranged, col. 46, lines 55-67, col 48, 30-33, transferring is preloading) selected sorted data to the computing device (col 48, lines 25-33) with a higher (array, sorting, fig 6, col 53, lines 1-44) than the relevance threshold (intended departure time, when, where, who to visit, or what to do, are the inherent threshold values in the context of this invention, fig 6, col 5, line 61, col 53, lines 15-44, col 48, lines 5-33)." Applicants respectfully traverse this rejection ground.

Similarly to the previous elements, <u>the Examiner's analysis strategy ignores the element as a whole</u>, as required by the legal authorities above. As before, the Examiner has dissected the element into subparts without providing any arguments to connect

the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

Appellants further submit that the relevance score is well defined in the independent claims as: "wherein analyzing the relevance score comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure." As a result, the Examiner is not allowed to redefine the terms "relevance score", and to expand its scope beyond what is intended by the Appellants and what is defined in the instant application.

As an example, the Examiner interprets "relevance threshold (... intended departure time, when, where, who to visit, or what to do, head/top of the array, sorting" to mean relevance threshold. As explained above, such absolute values do not qualify as thresholds or limits, as they do not provide the relevance scores that is comprised of the proximity of the stored data based on the association proximity measure and one proximity measure (as defined in the instant application).

In response to the applicant's arguments, DeLorme teaches that analyzing comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure (...POI/EOI, Optimally arranged output, EOI arrays, temporal data... Col. 17, lines 1-44;Col. 53, lines 15-43) which is similarly disclosed in the applicant's specification on pages 3 and 4, where the applicant describes temporal,

distance, and association proximities. Furthermore, Liddy discloses relevance score (Col. 4, lines 1-2). It would have been obvious to one of ordinary skill in the art at the time invention was made to combine the teachings of Liddy with DeLorme because it would provide optimal trip planner and the proximity decision will be based on the relevance score.

Appellants respectfully submit that the <u>Examiner's analysis strategy ignores the element as a whole</u>, as required by the legal authorities above. As before, the Examiner has dissected the element into subparts without providing any arguments to connect the various subparts, in contradiction to the legal authorities that require the Examiner to consider the invention as a whole.

More specifically, <u>the present invention makes a clear distinction between three proximity measures: "distance, time, and association."</u> Claim 1 specifies analyzing the relevance score by estimating a proximity of the stored data items based on an association proximity measure. As explained earlier, the association proximity measurement relates to people, who, for example, are explicitly indicated in the user's address book and to-do list. Refer to page 8, lines 6 -7 of the specification. DeLorme does not describe such "association proximity" measure.

The Examiner argues that DeLorme discloses: "DeLorme fails to disclose relevance score. However, Liddy discloses relevance score (col 4, lines 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Liddy with DeLorme because it would provide optimal trip planner and the proximity decision will be based on the relevance score." Applicants respectfully traverse this

rejection ground.

Appellants submit that the combination of DeLorme and Liddy does not yield the same or similar design as the present invention, as a whole. More specifically, the Examiner summarily states that the combination of both references is possible, but does not explain how the DeLorme design could be changed to accommodate the relevance score concept. In particular, the Examiner did not explain how the DeLorme-Liddy combination performs the following steps:

1)   automatically preloading selected sorted data to the computing device with a relevance score higher than the relevance threshold; and

2)   wherein analyzing the relevance score comprises estimating a proximity of the stored data items.

In addition, Applicants respectfully submit that neither Liddy nor DeLorme provides some teaching or suggestion to support the combination of these two references. As a result, based on the legal authorities above, obviousness cannot be established.

Applicants incorporate by reference the presentation made earlier in support of the allowance of claim 1, and submit that the independent claims 11, 19, and 21 are similarly not obvious in view of combination of DeLorme and Liddy, for containing generally comparable elements and limitations. As a result, the independent claims 1, 11, 19, and 21 are allowable, and the claims dependent thereon are also allowable. Such allowance is respectfully requested.

Respectfully submitted,

Date: <u>January 2, 2007</u>

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1. A method for automatic relevance-based preloading data to a computing device, comprising:

identifying any one or more of persons or current scheduled tasks prior to the occurrence of the tasks;

analyzing the relevance of stored data to any one or more of the current scheduled tasks or persons;

sorting the stored data based upon the relevance to any one or more of the current scheduled tasks or persons;

setting a predetermined relevance threshold;

automatically preloading selected sorted data to the computing device with a relevance score higher than the relevance threshold; and

wherein analyzing the relevance score comprises estimating a proximity of the stored data items to any one or more of persons or current scheduled tasks, based on an association proximity measure and at least one proximity measure.

2. The method of claim 1, wherein analyzing the relevance includes estimating a proximity of the stored data items to the any one or more of persons or current scheduled tasks, based on the combination of three proximity measures: distance, time, association.

3. The method of claim 1, wherein analyzing the relevance further includes combining the at least three proximity measures into a single relevance score.

4. The method of claim 1, wherein analyzing the relevance includes analyzing the proximity of information items to any one or more of the current scheduled tasks or persons.

5. The method of claim 1, wherein analyzing the proximity of information items includes measuring proximity in terms of a combination of the association measure along with any one of location and/or time.

6. The method of claim 1, wherein preloading selected sorted data to the computing device includes preloading the data to a communication device.

7. The method The method of claim 6, wherein preloading the data to the communication device includes preloading the data to a mobile telephone.

8. The method The method of claim 6, wherein preloading the data to the communication device includes preloading the data to a personal digital assistant (PDA) device.

9. The method of claim 1, wherein preloading the data includes preloading the data to a personal computer.

10. The method of claim 1, wherein identifying any one or more of current scheduled tasks or persons includes identifying events scheduled in a user's calendar, locations, and/or time frames.

11. A system for automatic relevance-based preloading information items to a computing device, comprising:

a proximity estimator that determines a proximity of the information items to a user's task based on a combination of measures comprised of at least an association proximity measure and any one or more of two proximity measures: distance and time;

a relevance estimator that combines the combination of measures into a single relevance score;

an information retriever that retrieves information items with a relevance score higher than a predetermined threshold relevance; and

a device loader that processes the information items retrieved by the information retriever and automatically preloads the retrieved information items to the computing device.

12. The system of claim 11, further including an information catalog that contains a list of the information items to which a user has access.

13. The system of claim 12, wherein the relevance estimator combines the combination of measures into a single relevance score by weighting each of the proximity measures forming part of the combination of measures.

14. The system of claim 12, wherein the relevance estimator combines the combination of measures into a single relevance score by computing a geometric mean of the proximity measures forming part of the combination of measures.

15. The system of claim 11, wherein the distance proximity measure includes a difference between a user's planned location for a given task

and a location of a scheduled task.

16. The system of claim 11, wherein the time proximity measure denotes immediacy of user's tasks.

17. The system of claim 11, wherein the association proximity measure denotes persons and contacts associated with a location and purpose of a given task.

18. The system of claim 11, further including a location tracker that determines the user's location.

19. A computer software program for automatic relevance-based preloading information items to a computing device, comprising:
    means for determining a proximity of the information items to a user's task based on a combination of measures comprised of at least an association proximity measure and any one or more of two proximity measures: distance and time;
    means for combining the combination of measures into a single relevance score;
    means for retrieving information items with a relevance score higher than a predetermined threshold relevance; and
    means for processing the information items retrieved by the retrieving means and automatically preloading the retrieved information items to the computing device.

20. The computer software program of claim 19, wherein the proximity determining means combines the combination of measures into a single relevance score.

21. A computer program product having a plurality of executable instruction codes for automatic relevance-based preloading information items to a computing device, comprising:

a first set of instruction codes for determining a proximity of the information items to a user's task based on at least three proximity measures: distance, time, and association;

a second set of instruction codes for combining the at least three proximity measures into a single relevance score;

a third set of instruction codes for retrieving information items with a relevance score higher than a predetermined threshold relevance; and

a fourth set of instruction codes for processing the information items retrieved by the information retriever and automatically preloading the retrieved information items to the computing device.

22. The computer program product of claim 21, further comprising an information catalog that contains a list of the information items to which a user has access.

23. The computer program product of claim 22, wherein the second set of instruction codes combines the at least three proximity measures into a single relevance score by weighting each of the at least three proximity measures.

24. The computer program product of claim 22, wherein the second set of instruction codes combines the at least three proximity measures into a single relevance score by computing a geometric mean of the at least three proximity measures.

25. The computer program product of claim 21, wherein the distance proximity measure includes a difference between a user's planned location for a given task and a location of a scheduled task.

26. The computer program product of claim 21, wherein the time proximity measure denotes immediacy of user's tasks.

27. The computer program product of claim 21, wherein the association proximity measure denotes persons and contacts associated with a location and purpose of a given task.

28. The computer program product of claim 21, further comprising a fifth set of instruction codes for determining the user's location.

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None

APPENDIX C

RELATED PROCEEDINGS

None